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ABSTRACT

A system including a laser and a semiconductor optical amplifier (SOA) and a method of generating a dithered laser light with substantially constant amplitude with this system. The laser drive current is modulated to generate a modulated laser light with optical
5 linewidth dithering. The modulated laser light is coupled into the SOA. The SOA drive current is modulated approximately 180° out of phase with the laser drive current to generate the dithered laser light with substantially constant amplitude.